

SELF-ALIGNED BURIED STRAP PROCESS USING DOPED HDP OXIDE

Abstract of Disclosure

The invention provides a trench storage structure that includes a substrate having a trench, a capacitor conductor in the lower part of the trench, a conductive node strap in the trench adjacent the capacitor conductor, a trench top oxide above the capacitor conductor, and a conductive buried strap in the substrate adjacent the trench top oxide. The trench top oxide includes a doped trench top oxide layer above the conductive strap, and an undoped trench top oxide layer above the doped trench top oxide layer